ALUMINUM SULFONATE/POLYMER PRIMER MSP-96-06D

1.0 Description. This specification covers a high solids, long oil modified epoxy ester primer containing corrosion inhibitive calcium sulfonate/polymer pigment for use over previously painted steel surfaces or over properly primed steel surfaces.

1.1 The coating shall be a single package, lead free, long oil modified epoxy ester containing calcium sulfonate rust inhibitive pigment.

1.2 The coating shall meet current VOC (Volatile Organic Content) restrictions.

1.3 The coating shall contain a corrosion-inhibitive pigment system and shall exhibit excellent intercoat and intracoat adhesion when applied at thicknesses of 3 mils (75 µm) dry film thickness (DFT). It shall dry to a flat or satin finish.

1.4 The coating is recommended for use as a primer coat over tightly adhering paints as recommended by the coating manufacturer or over properly primed steel.

2.0 Reference Standards.

2.1 Test Methods for Properties:

ASTM D562	Consistency of Paints Using Stormer Viscometer
ASTM D1210	Fineness of Dispersion of Pigment - Vehicle Systems
ASTM D1475	Density of Paint, Varnish, Lacquer and Related Products
ASTM D3960	Volatile Organic Content (VOC) of Paints
ASTM B117	Salt Fog Resistance Test

2.2 Standard Specifications for Ingredients:

TT-T-291	Thinner Paint, Mineral Spirits, Regular and Odorless, Type I

2.3 Federal Test Method Standard No. 141:

Method 4021	Pigment Content (centrifuge)
Method 4041	Volatile and Non-Volatile Content
Method 4053	Non-Volatile Vehicle Content
Method 4061	Drying Time
Method 4203	Reducibility and Dilution Stability
Method 4494	Sag Test (multi-notch blade)

3.0 Composition. All materials submitted under this specification shall conform to the compositional analysis shown.

	Percent by Weight (Mass
Pigment	20 – 24
Metallic Aluminum Zinc Oxide and Calcium Ion	4 – 8
Exchange Inhibitive Pigments	21 – 25
Color Pigments and Inerts	69 – 73

	Percent by Weight (Mass
Vehicle	76 – 80
Sulfonate/Polymer Solids	45 – 49
Calcium Carbonate Solids	19 – 23
Mineral Spirits	29 – 33
Paint Driers	0.6 - 1.0

3.1 Any paint based on the specified ingredients shall be uniform, stable in storage and free from grit and coarse particles.

4.0 Properties.

4.1 Mixed Paint.

	Percent by Weight (Mass
Total Solids, minimum	70
Pigment, extracted with mineral spirits, minimum	18
Non-Volatile in Vehicle, minimum	65
Viscosity, 77 F (25 C), KU	90 – 143
Lb. per US Gallon (Kg per Liter), minimum	10.1 (1.21)
Volatile Organic Content, lb/gal (g/L), max	3.5 (420)
Sag Resistance, mils (μm), min	4 (100)
Drying Time (2 to 3 mils (50 to 75 μm) dry film)	**Hours**
To Touch, min.	5
Tack Free, min.	8
Dry Hard, min.	24
Salt Spray Resistance, 1,500 hours (panel coated with penetrating sealer, midcoat primer, and 4 mil (100 μm) dry film thickness of finish coat, over SSP-SP-5 blasted cold rolled steel: 1 to 2 mil (25 to 50 μm) profile	No more than 1 percent rust, undercutting, blistering or peeling

4.2 Odor. The odor shall be normal for the materials permitted (ASTM D1296).

4.3 Color. The color shall provide a contrast between the primer and the topcoat.

4.4 Application Conditions. The coating shall be capable of being applied when the material is a temperature of between 35.6 F (2 C) and 120.2 F (49 C). Normal material temperature shall be 50 F (10 C) to 89.6 F (32 C).

4.4.1 The coating shall be capable of being applied when the surface temperature is between 35.6 F (2 C) and 165.2 F (74 C). Normal surface temperature shall be 55.4 F (13 C) to 89.6 F (32 C).

4.4.2 The coating shall be capable of being applied when the ambient temperature is between 35.6 F (2 C) and 120.2 F (49 C). Normal ambient temperature shall be 55.4 F (13 C) to 100.4 F (38 C).

4.4.3 The coating shall be capable of being applied at relative humidity of up to 95 percent. Normal humidity shall be between 30 and 90 percent.

4.5 The shelf life of the coating shall be a minimum of twenty four months when stored at 167 F (75C).

4.6 The coating shall have a theoretical coverage rate of 342 square feet (31.8 m^2) per mixed gallon (liter) at 3 mils (75 μm) dry film thickness.

4.7 The coating shall be applied at 3 mils (75 μm) dry film thickness over tightly adhering paints as recommended by the coating manufacturer or over properly primed steel.

4.8 The coating shall be capable of being applied by airless or conventional spray with equipment of the type listed on manufacturer's current product data sheet. It shall be capable of being applied by roller or brush provided manufacturer's recommendations are followed.

5.0 Labeling. Each container shall be legibly marked with the following information:

Name: Aluminum Sulfonate/Polymer Primer
Specification:
Color:
Lot Number:
Date of Manufacture:
Quantity of Paint in Container:
Information and Warnings as may be required by Federal and State Laws
Manufacturer's Name and Address:

6.0 Inspection. All material supplied under this specification shall be subject to timely inspection by the department or authorized representative. The department shall have the right to reject any materials supplied which are found not to comply with the requirements of this specification.

6.1 Samples of any or all ingredients used in the manufacture of this paint may be requested by the department and shall be supplied upon request, along with the supplier's name and identification for the material.

7.0 Acceptance. Acceptance of Aluminum Sulfonate/Polymer Primer will be based on tests performed by the engineer or authorized representative.